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QT 4.0 TO BE RELEASED AT DAYTON

HR AMSAT NEWS SERVICE BULLETIN 112.01 FROM AMSAT HQ
SILVER SPRING, MD APRIL 22, 1989
TO ALL RADIO AMATEURS BT

QUIKTRAK 4.0 Will Be Ready For Release For The Dayton Hamvention

AMSAT-NA is pleased to announce that QUIKTRAK version 4.0 (QT 4.0) will be ready for release on April 28, 1989. Those who will be attending the Dayton Hamvention will be able to obtain the first available copies of QT 4.0 at the AMSAT booth during the three days of the Dayton Hamvention. After Dayton it will be available from AMSAT-NA Headquarters. This "new" version of Bob McGwier's (N4HY) "premier" satellite tracking program not only retains many of the fine features of QT 3.2 but also allows the user more "flexibility" with the addition of several new features. For example, the number of satellites in which Keplerian data can be maintained has be increased to 100, up from the fourteen which QT 3.2 allowed; also, QTH data can now be kept for over 100 different cities. For those who have auto-tracking capability incorporated into their OSCAR station, with the up-graded "auto-track-ing" capability added to QT 4.0, you can now designate up to fourteen different satellites to be "tracked" by your "auto-tracker" in the order of their appearance at your QTH. For OSCAR users who "hate to enter data," a new "full-screen editor" has been added to ease the "data entry" process. If you enjoy watching the position of the satellites being displayed on maps, QT 4.0 now supports EGA graphics; it continues to support CGA graphics with the user choosing between the two graphics modes by a simple entry in your QTH data file. And for those who enjoy making "visual" contacts with space objects, N4HY has not forgotten you! Bob has added a new feature which will inform you whether it will be possible to visually observe a satellite from your QTH for a given time-of-day and sunlight condition. And finally, the feature in which Bob McGwier is particulary pleased with is the "mutual visibility window" option. Have you ever wanted to set up schedule with another station on an OSCAR satellite but didn't want to have to run your tracking program for both QTHs? With this added "mutual visibility" option you will get a tabular listing of AOS, LOS, MA count, and duration for all "windows of mutual visibility" between your QTH and any of the cities you have entered in your QTH database. Also, for AO-13 users, QT 4.0 will give you the time of "minimum-squint-angle" between you and a selected city. For other satellites, for example, RS 10/11, this feature will give you the "time-of-minimum range" between your QTH and the city you select. So if you are looking for that "rare DX station," this new option in QT 4.0 will definitely take the guess work out of the problem. AMSAT-NA has adopted a new policy on up-grades to QT 4.0 for those individuals who hold valid copies of older versions of the QUIKTRAK program. If you would like more information about this new "update" policy, please call Martha at AMSAT-NA HQ's at (301) 589-6062. [For owners of QUIKTRAK of 3.2 and earlier versions who will be attending the Dayton Hamvention, you will be able to "upgrade" instantaneously to QT 4.0 at the AMSAT booth. Just bring your original disk to the AMSAT-NA booth and it can be done on the spot.]

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SB ALL @ AMSAT $ANS-112.02

AMSAT FORUMS PLANNED FOR DAYTON

HR AMSAT NEWS SERVICE BULLETIN 112.02 FROM AMSAT HQ
SILVER SPRING, MD APRIL 22, 1989
TO ALL RADIO AMATEURS BT

AMSAT-NA Will Conduct Several Forums At The Dayton Hamvention

Jack Crabtree (AA0P), AMSAT-NA VP of Field Operations, wants to encourage all those who will be attending the Dayton Hamvention to plan to attend the one of the many fine forums that AMSAT will be sponsoring during this "world class" amateur radio "extravaganza." The following is a list of times, speakers, and topics of forums to be sponsored by AMSAT-NA:

Friday, April 28th starting at 1:30 P.M. EDT

John Champa, K8OCL, "Getting Started On Mode B"
Tom Clark, W3IWI, "MICROSATS"
Doug Loughmiller, KO5I, "AMSAT AND YOU"

Saturday, April 29 starting at 3:00 P.M. EDT:

Keith Pugh, W5IU, "Satellites For Beginners"
Courtney Duncan, N5BF, "MICROSAT Ground Segment"
Jan King, W3GEY, "AMSAT Phase IV Project"
Bob McGwier, N4HY, "QUICKTRAK 4.0"
Doug Loughmiller, KO5I, "AMSAT AND YOU"

These forums are designed to present a wide range of topics, from "getting started" on OSCAR satellites to topics on future OSCAR satellite designs. After each of these forums, speakers available at the AMSAT booth so that attendees of these forums will have a chance to chat with them. Look for the specific room locations in the Dayton Hamvention Program Guide for these AMSAT forums. All hams are invited to come by the AMSAT booth and meet the many volunteers who help bring you OSCAR satellites.

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SB ALL @ AMSAT $ANS-112.03
SHORT BURSTS

HR AMSAT NEWS SERVICE BULLETIN 112.03 FROM AMSAT HQ
SILVER SPRING, MD APRIL 22, 1989
TO ALL RADIO AMATEURS BT

Short Bursts

AMSAT-NA's VP of Field Operations, Jack Crabtree, (AA0P) would like to announce the following appointments of new AMSAT Area Coordinators:

Vinnie Banville, WB2YGA, Waymart, PA
Dick Campbell, N3FKV, Annapolis, MD
Roy Robinson, K4EDU, Augusta, GA
Dick Schiller, K4BQH, Crestwood, KY

Each of these appointees has been highly recommended by their respective AMSAT-NA Regional Coordinator. AMSAT-NA extends a hearty welcome to each of these new Area Coodinators to the Field Operations Team.

For those OSCAR satellite enthusiasts who subscribe to QST, in the May issue please take special note of the front cover. There you will find an artist conception of what the AMSAT-NA Phase IV geostationary

satellite will look like as part of the ARRL's 75 Diamond Jubilee QSL card. Also, on page 37 of this May issue of QST, you will find the first of a two-part series on the MICROSATs. This article by Doug Lougmiller (KO5I) and Bob McGwier (N4HY) is only part of the MICROSAT "media blitz" which will be going on for several months to come.

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FLASH! FLASH! FLASH! FLASH! FLASH! FLASH! FLASH! FLASH! FLASH! FLASH!
THE FOLLOWING ADDED BY AMSAT-NA CBBS at St. Louis (314) 447-3003 24hr 7day 300/1200/2400 baud. This section may have additions through the week!

MODE-S:

Why does it take excessive uplink power to work AO-13 Mode-S ?

The following is my explanation of what is happening with the AO-13 Mode-S transponder.

The Mode-S transponder was designed so that either the Beacon or the Passband could be enabled but NOT BOTH at the same time. The passband is enabled by a CMOS logic line that comes from the IHU and causes the Beacon oscillator to be turned off and the an IF transistor switch at 10.7 MHz. to be turned on. For whatever reason, the IHU is not able to switch the Mode-S transponder to Passband. This has been shown to be the case as the Beacon is present all the time Mode-S is on regardless of the Beacon/Passband logic state.

Presently the way QSO's are made is by forcing signals through the last IF transistor switch that is biased off. When I had the Mode-S unit on my bench I was able to force a signal through the passband with the Beacon on and Passband off by increasing the input signal level about 20 dB. to equal the Beacon level. The initial design level assumed 2.5 KW erp to produce a downlink signal equal to the beacon. Without being able to turn the Passband on, means it now takes 20 dB. more uplink signal or about 250KW erp to equal the beacon level. My 50 KW+ erp gets me within 6 dB. of the Beacon level. If you consider that I don't know my antenna gain exactly and that 50 KW is a conservative estimate, the numbers and the assumption of what is going on seems consistent.

73,s K0RZ

FIELD OPS NET ON AO-13:

The 15 April 89 Operations Net was held on 16 April 89 from 0417 to 0502 UTC. Net control was N5BF. Attempting to start the net at 0407 UTC, I was called by OE9DGV, Guntram in Hohenems, Austria and had a brief QSO.

Conditions started poor and improved throughout the session. WD0E, WA4UPD, KA8WWQ, WD8QCN, WB6GFJ, and VE7XQ checked in.

WD0E and KA8WWQ will be at the Dayton Hamvention. A Command Station Development Program informal meeting at Dayton was discussed. Late word on this will be available on the WD0GML BBS, at the AMSAT booth at Dayton, and possibly on next week's Operations Net.

WB6GFJ had been taking AO-13 telemetry data and reported that it looked pretty nominal up to net time. AGC had peaked at -2.2 dB. He had spoken with WA6KBL, the Project OSCAR Technical Director about the status of the serial port antenna controller

project. His main concern is not so much that this project be done by Project OSCAR but that the results are made available to everyone.

WD0E is interested in SatFoxHunt software.

VE7XQ inquired about the new release status of QuikTrak. The goal is to have it available at Dayton.

Although ICOM had just serviced my IC-471 and reported no unusual sideband transmission problems, several net members reported bad audio on my LSB uplink to the satellite, specifically, no lows. Switching to USB uplink (and LSB downlink) improved audio greatly. After trying different microphones, it was theorized that the problem was a broken or misadjusted crystal filter.

The next Operations Net will be held on 22 April 89 at 1300 UTC. Downlink frequencies for the net and a meeting place for AMSAT Operations and Field Operations in general are 145.950 and 435.970 MHz. Look forward to seeing you there.

73 all, Courtney, N5BF